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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/680,800	10/07/2003	Penny J. Thompson	02-20	5369

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EXAMINER	
CHANDRA, GYAN	

ART UNIT	PAPER NUMBER
1646	

DATE MAILED: 07/03/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	**Application No.** 10/680,800	**Applicant(s)** THOMPSON ET AL.
	Examiner Gyan Chandra	**Art Unit** 1646

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *1* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *14 April 2006*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-48* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☐ Claim(s) _____ is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☒ Claim(s) *1-48* are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)

2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____.

4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.

5) ☐ Notice of Informal Patent Application (PTO-152)

6) ☐ Other: _____.

DETAILED ACTION

Note: Upon further consideration of the instant claims, NPL search and sequence search results, the Examiner has determined that additional claim groups are required in the previous restriction. Therefore, the Restriction requirement of 23 January 2006 is hereby vacated.

Election/Restrictions

Restriction to one of the following inventions is required under 35 U.S.C. 121:

I. Claims 1-8, 10 -33 and 44-45, in so far as they are drawn to a method of modulating gastrointestinal contractactility in a mammal comprising administering to the mammal a polypeptide comprising the amino acid residue 28-108 of SEQ ID NO: 2, classified in class 514, subclass 2.

II. Claim 9, drawn to a method of stimulating gastrointestinal contractactility in a mammal comprising administering to the mammal a polypeptide comprising the amino acids 20-105 of SEQ ID NO: 5 and a polypeptide comprising the amino acids 28-108 of SEQ ID NO: 2, classified in class 514, subclass 2.

III. Claims 34-35 and 44-45, in so far as they are drawn to a method of stimulating chemokine release in a mammal comprising administering to the mammal a polypeptide comprising the residues 28-108 of SEQ ID NO: 2, classified in class 514, subclass 2.

IV. Claims 34-35 and 44-45, in so far as they are drawn to a method of stimulating chemokine release in a mammal comprising administering to the mammal a polypeptide comprising the residues 20-105 of SEQ ID NO: 5, classified in class 514, subclass 2.

V. Claim 36, drawn to a method of inducing or increasing appetite or weight in a mammal comprising administering to the mammal a polypeptide comprising the residues 28-108 of SEQ ID NO: 2, classified in class 514, subclass 2.

VI. Claim 36, drawn to a method of inducing or increasing appetite or weight in a mammal comprising administering to the mammal a polypeptide comprising the residues 20-105 of SEQ ID NO: 5, classified in class 514, subclass 2.

VII. Claim 37, drawn to a method of increasing or decreasing sensitization to thermal, chemical or painful stimulus comprising administering a polypeptide comprising amino acids 28-108 of SEQ ID NO: 2, classified in class 424, subclass 9.1.

VIII. Claim 37, drawn to a method of increasing or decreasing sensitization to thermal, chemical or painful stimulus comprising administering a polypeptide comprising amino acids 25-105 of SEQ ID NO: 5, classified in class 424, subclass 9.1.

IX. Claims 38-39, in so far as they are drawn to a method of increasing or decreasing sensitization to thermal, chemical or painful stimulus comprising administering an antagonist to a polypeptide comprising amino acids 28-108 of SEQ ID NO: 2, classified in class 424, subclass 9.1.

X. Claims 38-39, in so far as they are drawn to a method of increasing or decreasing sensitization to thermal, chemical or painful stimulus comprising administering an antagonist to a polypeptide comprising amino acids 20-105 of SEQ ID NO: 5, classified in class 424, subclass 9.1.

XI. Claims 40-43, in so far as they are drawn to a method of inducing vasculogenesis in cardiac stem cells comprising administering a polypeptide comprising amino acids 28-108 of SEQ ID NO: 2, classified in class 424, subclass 9.1.

XII. Claims 44-45, in so far as they are drawn to a method of stimulating gastrointestinal contractactility in a mammal comprising administering to the mammal a polypeptide comprising the amino acids 20-105 of SEQ ID NO: 5, classified in class 514, subclass 2.

XIII. Claims 44-45, in so far as they are drawn to a method of stimulating gastrointestinal contractactility in a mammal comprising administering to the mammal a polypeptide comprising the amino acids 28-129 of SEQ ID NO: 29, classified in class 514, subclass 2.

XIV. Claims 46-47, in so far as they are drawn to an isolated nucleic acid sequence of SEQ ID NO: 14 and a method of producing the polypeptide encoded by the nucleic acid of SEQ ID NO: 14 comprising culturing a recombinant cell comprising an expression vector comprising the nucleic acid of SEQ ID NO: 14, classified in class 435, subclass 69.1.

XV. Claim 48, drawn to a polypeptide encoded by nucleic acid sequence of SEQ ID NO: 14, classified in class 530, subclass 350.

The inventions are distinct, each from the other because of the following reasons:

Inventions I, II, III, IV, V, VI,VII, VIII, IX, X, XI, XII, and XIII are unrelated. Inventions are unrelated if it can be shown that they are not disclosed as capable of use together and they have different modes of operation, different functions, or different effects (MPEP § 806.04, MPEP § 808.01). The instant specification does not disclose that these methods would be used together. The method of modulating gastrointestinal contractactility in a mammal comprising administering to the mammal a polypeptide comprising the amino acid residue 28-108 of SEQ ID NO: 2 (group I), the method of stimulating gastrointestinal contractactility in a mammal comprising administering to the mammal a polypeptide comprising the amino acids 20-105 of SEQ ID NO: 5 and a polypeptide comprising the amino acids 28-108 of SEQ ID NO: 2 (group II), the method of stimulating chemokine release in a mammal comprising administering to the mammal a polypeptide comprising the residues 28-108 of SEQ ID NO: 2 (group III), the method of stimulating chemokine release in a mammal comprising administering to the mammal a polypeptide comprising the residues 20-105 of SEQ ID NO: 5 (group IV), the method of inducing or increasing appetite or weight in a mammal comprising administering to the mammal a polypeptide comprising the residues 28-108 of SEQ ID NO: 2 (group V), the method of inducing or increasing appetite or weight in a mammal comprising administering to the mammal a polypeptide comprising the residues 20-105 of SEQ ID NO: 5 (group VI), the method of increasing or decreasing sensitization to thermal, chemical or painful stimulus comprising administering a polypeptide comprising the residues 28-108 of SEQ ID NO: 2 (group VII), the method of increasing or decreasing sensitization to thermal, chemical or painful stimulus comprising administering a polypeptide comprising amino acids 25-105 of SEQ ID NO: 5 (group VIII), the method of increasing or decreasing sensitization to thermal, chemical or painful stimulus comprising administering an antagonist to a polypeptide comprising amino acids 28-108 of SEQ ID NO: 2 (group IX), the method of increasing or decreasing sensitization to thermal, chemical or painful stimulus comprising administering an antagonist to a polypeptide comprising amino acids 20-105 of SEQ ID NO: 5 (group X), the method of inducing vasculogenesis in cardiac stem cells comprising administering a polypeptide comprising amino acids 28-108 of SEQ ID NO: 2 (group XI), the method of stimulating gastrointestinal contractactility in a mammal comprising administering to the mammal a polypeptide comprising the amino acids 20-105 of SEQ ID NO: 5 (group XII), and the method of stimulating gastrointestinal contractactility in a mammal comprising administering to the mammal a polypeptide comprising the amino acids 28-129 of SEQ ID NO: 29 (group XIII) are all unrelated as they comprise distinct steps and utilize different products and population makeup which demonstrate that each method has a different mode of operation. Each invention performs this function using a structurally and functionally divergent material.

Searching the inventions of Groups I, II, III, IV, V, VI, VII, VIII, IX, X, XI, XII, and

XIII would impose serious search burden. Furthermore, the inventions of Groups I, II, III, IV, V, VI,VII, VIII, IX, X, XI, XII, and XIII require separate, distinct and non-coextensive searches e.g., protein database, population makeup and NPL.

The products of group XIV and XV are patentably distinct inventions for the following reasons. Groups XIV and XV are directed to products that are distinct both physically and functionally, are not required one for the other, and are therefore patentably distinct. The polynucleotide of Group XIV and the polypeptide of Group XV are patentably distinct for the following reasons: polypeptides, which are composed of amino acids, and polynucleotides, which are composed of purine and pyrimidine units, are structurally distinct molecules; any relationship between a polypeptide and polynucleotide is dependent upon the information provided by the nucleic acid sequence open reading frame as it corresponds to the primary amino acid sequence of the encoded polypeptide. In the present claims, a polynucleotide of Group XIV can be used differently such as in a hybridization assay.

Furthermore, searching the inventions of Groups XIV and XV together would impose a serious search burden. In the instant case, the search of the polypeptides and the polynucleotides is not coextensive. The inventions of Groups XIV and XV have a separate status in the art as shown by their different classifications. In cases such as this one where descriptive sequence information is provided, the sequences are searched in appropriate databases. There is also search burden in the non-patent literature. Prior to the concomitant isolation and expression of the sequence of interest there may be journal articles devoted solely to polypeptides which would not have described the polynucleotide. Similarly, there may have been “classical” genetics papers which had no knowledge of the polypeptide, but spoke to the gene. Searching, therefore, is not coextensive. Furthermore, a search of the nucleic acid molecules of Group XIV would require an oligonucleotide search, which is not likely to result in relevant art with respect to the polypeptide of Group XV. As such, it would be burdensome to search the inventions of Groups XIV and XV.

Inventions XIV and I/II/III/IV/V/VI/VII/VIII/IX/X/XI/XII/XIII are unrelated. Inventions are unrelated if it can be shown that they are not disclosed as capable of use together and they have different modes of operation, different functions, or different effects (MPEP § 806.04, MPEP § 808.01). The methods I/II/III/IV/V/VI/VII/VIII/IX/X/XI/XII/XIII do not use the nucleic acid sequence of group XIV.

Inventions XV and I/II/III/IV/V/VI/VII/VIII/IX/X/XI/XII/XIII are unrelated. Inventions are unrelated if it can be shown that they are not disclosed as capable of use together and they have different modes of operation, different functions, or different effects (MPEP § 806.04, MPEP § 808.01). The methods I/II/III/IV/V/VI/VII/VIII/IX/X/XI/XII/XIII do not use the polypeptide of group XV.

Applicant is advised that the reply to this requirement to be complete must include an election of the invention to be examined even though the requirement be traversed (37 CFR 1.143).

Applicant is reminded that upon the cancellation of claims to a non-elected invention, the inventorship must be amended in compliance with 37 CFR 1.48(b) if one or more of the currently named inventors is no longer an inventor of at least one claim remaining in the application. Any amendment of inventorship must be accompanied by a request under 37 CFR 1.48(b) and by the fee required under 37 CFR 1.17(i).

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Gyan Chandra whose telephone number is (571) 272-2922. The examiner can normally be reached on 9:00-5:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Gary Nickol can be reached on (571) 272-0835. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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26 June 2006
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